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EXAMINER
PARKER, BRANDI P

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3624	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

		Application No.	Applicant(s)	
Office Action Summary		10/764,958	MARSTEN, ROY E.	
		Examiner	Art Unit	
		BRANDI P. PARKER	3624	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 October 2008</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-26</u> is/are pending in the application.

    4a) Of the above claim(s) <u>4</u> is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) <u>1-3, and 5-26</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Acknowledgements

1.   The following is a Final Office action in response to communications filed on 10/29/2008. Claims 1, 5-17, 19 and 23-24 have been amended and claims 25-26 are newly added. Claim 4 has been cancelled.

Response to Applicant's Remarks

2.   Applicant's amendment to claims 1 and 23 has been fully considered and is not persuasive. The rejection of claims 1-23 under 35 USC § 101 is sustained.

3.   In order for a method to be considered a "process" under §101, a claimed process must either: (1) be tied to a particular machine or apparatus or (2) transforms a particular article to a different state or thing. *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972).   If neither of these requirements is met by the claim, the method is not a patent eligible process under §101 and is non-statutory subject matter. In addition, the tie to a particular apparatus, for example, cannot be mere extra-solution activity. See *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

4.   Whether a method appropriately includes particular machines to qualify as a section 101 process may not always be a straightforward inquiry. As Comiskey recognized, "the mere use of the machine to collect data necessary for application of the mental process may not make the claim patentable subject matter." *In re Comiskey*, 499 F.3d 1365, 1380 (Fed. Cir. 2007), (citing *In re Grams*, 888 F.2d 835, 839-40 (Fed. Cir. 1989)). In other words, nominal or token recitations of structure in a method claim should not convert an otherwise ineligible claim into an eligible one. *Ex parte Langemyr* (BPAI 2008-1495, 2008).

Claims 1 and 23 are directed towards identifying optimum product configurations. As the claims are not sufficiently tied to a particular machine, the claimed method is non-statutory and therefore rejected under 35 U.S.C. 101.

5.   Claims 2-3, 5- 22, and 25-26 are rejected for being dependent upon rejected claim 1.

6.   Applicant's arguments and amendments with respect to claims 1, 5-17, 19 and 23-24 and newly added claims 25-26 have been considered but are moot in view of the new ground(s) of rejection.

Examiner's Notes

7.   The Examiner has pointed out particular references contained in the prior art of record within the body of this action for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply. Applicant, in preparing the response, should consider fully the entire reference as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 1-26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brunner et al (US 7386832) and Kapadia et al (US 7039602) in further view of Schierholt (US 2005/0149377).

10.   With respect to claims 1, 21 and 23, Brunner teaches a method,

a.   receiving product configuration data relating to the plurality of possible product configurations, wherein each product configuration includes a plurality of selectable features, each selectable feature including a plurality of options (column/line 3/28-39);

Brunner does not directly teach the optimization model generation. However, Kapadia teaches:

b.   arranging the product configuration data into ordered sets of dimensions, wherein each ordered set of dimensions represents one of the plurality of possible product configurations, wherein each selectable feature of each product configuration is represented by one respective dimension of each ordered set (column/line 5/8-18);

c.   applying mix-and-match rules to the ordered sets of dimensions to identify a plurality of valid ordered sets of dimensions representing valid product configurations as a subset of the plurality of possible product configurations (column/line 6/11-23);

d.   defining an optimization model to identify the optimum subset of valid product configurations from the plurality of valid ordered sets of dimensions based on a desired objective;

e.   solving the optimization model to generate the optimum subset of valid product configurations that meet the desired objective; and

f.   outputting the generated optimum subset of valid product configurations that meet the desired objective.

It would have been obvious to one of ordinary skill in the art to include the business system of Brunner with the ability to teach the optimization model generation as taught by Kapadia since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Brunner and Kapadia does not directly teach receiving historical demand. However, Shierholt teaches:

g.   receiving historical demand data associated with the plurality of possible product configurations (paragraph 0010).

It would have been obvious to one of ordinary skill in the art to include the business system of Brunner and Kapadia with the ability to teach receiving historical demand as taught by Schierholt since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

11.   As to claim 2, Kapadia teaches the method of claim 1 further comprising the step of associating a cost and a revenue to each valid product configuration (column/line 8/27-29).

12.   Regarding claim 3, Kapadia teaches the method of claim 2 wherein the cost associated with each valid product configuration is comprised of a plurality of per option costs (column/line 8-45-57).

13.   As to claim 5, Kapadia does not explicitly teach associating demand with valid product configurations.   However, Schierholt teaches wherein the historical demand data associated with the plurality of possible product configurations is based on the demand of each respective option of each respective valid product configuration (paragraph 0010). It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Kapadia with the methods in Schierholt by including demand in the analysis to improve the optimization process to increase profit.

14.   Regarding claim 6, Kapadia teaches the method of claim 1 wherein the desired objective is to maximize the profit of a manufacturer or retailer of the product (column/line 7/38-44).

15.   With respect to claim 7, Kapadia teaches the method of claim 1 wherein the desired objective is to minimize the costs of a manufacturer of the product (column/line 6/56-7/2, 7/13-30)

16.   As to claim 8, Kapadia does not explicitly teach having an objective to maximize coverage of customer demand.   However, Schierholt teaches wherein the desired objective is to maximize coverage of customer demand for the product (paragraph 0013). It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Kapadia with the methods in Schierholt by including demand in the analysis to improve the optimization process to increase profit.

17.   Regarding claims 9 and 10, Kapadia teaches the method of claim 1 wherein the optimization model is defined such that the number of product configurations in the optimum set of product configurations is fixed or variable.   (column/line 6/56-7/2, 7/13-30)

18.   As to claim 11, Kapadia teaches the method of claim 1 wherein the dimensions of the ordered sets represent the selectable features in a fixed and non-modifiable order (column/line 5/8-18, regarding default configurations).

19.   Regarding claim 12, Kapadia teaches the method of claim 1 wherein the step of identifying the valid product configurations comprises the steps of applying mix-and-

match rules to identify invalid or impermissible product configurations (column/line 6/11-23).

20.   With respect to claim 13, Kapadia teaches the method of claim 12. Examiner notes that it is old and well known in the art to us fast enumeration algorithms to iterate though the contents of all possible configurations and and list the partial configurations separately.

21.   As to claim 14, Kapadia teaches the method of claim 1 wherein the step of defining configuration neighborhoods comprises the step of defining a relation structure (column/line 8/30-38).

22.   Regarding to claim 15, Kapadia teaches the method of claim 14. Kapadia does not explicitly teach having options that are upgradeable. However, Balasinski teaches an upgrade relation that identifies at least one feature having an option that is upgradeable (column/line 6/23-29).   Having the upgrade being at no additional cost to a customer consist of non functional descriptive material that does not limit the scope of the claim. It would have been obvious to one with ordinary skill in the art to combine Kapadia with Balasinski to increase a manufacturer's product exposure by offering available products that are compatible with the product that the customer wishes to purchase.

23.   With respect to claim 16, Kapadia does not explicitly teach features having options that are convertible at a conversion cost. However, Balasinski teaches the method of claim 14 wherein the relation structure is a convert relation that identifies at least one feature having an option that is convertible to another option at a respective conversion cost (Figure 2, column/line 2/2-28, 44-61, 7/61-67). It would have been obvious to one with ordinary skill in the art to combine Kapadia with Balasinski to increase a manufacturer's product exposure by offering available products that are compatible with the product that the customer wishes to purchase.

24.   As to claim 17 and 19, Kapadia teaches the method of claim 14 having a relation structure. Kapadia does not explicitly teach having an option at an acceptance value or probability customer will accept the option. However, Walker teaches identifying at least one feature having an option that is acceptable to a consumer desiring a different option at a respective acceptance value (column/line 4/46-67, regarding "expected value" of alternative option). It would have been obvious to one having ordinary skill in the art to combine to Kapadia with Walker to select the best options to present to the customer to improve the changes that the customer will select the option.

25.   Regarding claim 18, Kapadia does not explicitly teach having an acceptance value that is a probability that the customer will accept the option. However, Walker teaches wherein the acceptance value is a probability that the customer will accept the acceptance option instead of the different option (column/line 4/46-67). It would have

been obvious to one having ordinary skill in the art to combine to Kapadia with Walker

to select the best options to present to the customer to improve the changes that the

customer will select the option.

26.   As to claim 20, Kapadia teaches the method of claim 14 wherein the relation

structure identifies at least one valid product configuration that captures another valid

product configuration through an upgrade, conversion, or acceptance of at least one

option (column/line 8/22-29).

27.   With respect to claim 22, whether or not the product is a manufactured good or

service does not affect the structure of the method to limit the scope of the claim.

Therefore, claim 22 consist of non functional descriptive material and is anticipated by

Kapadia.

28.   Regarding to claim 24, Brunner teaches a computerized system for identifying an

optimum set of product configurations comprising:

   h.   a configuration generator for receiving product configuration data, the

   product   configuration   data   representative   of   all   possible   product

   configurations, each product configuration defined by a plurality of features,

   each feature having a plurality of options, the configuration generator applying

   mix-and-match rule to identify a subset of valid product configurations, the

configuration generator further representing each of the valid product configurations as an ordered array (column/line 3/28-39);

Brunner does not directly teach cost and revenue optimization in addition to incorporating demand for the valid product configuration. However, Kapadia teaches:

i.   a cost calculator for calculating and associating a cost of manufacture for each of the valid product configurations (column/line 6/56-7/2, 7/13-30)

j.   a revenue calculator for calculating and associating a revenue potential for each of the valid product configurations (column/line 7/38-44);

k.   an objective-based modeler for defining an optimization model and for receiving product configuration information from the configuration generator, the demand simulator, the cost calculator, and the revenue calculator (column/line 6/56-7/2, 7/13-30); and

l.   an optimization engine for solving the optimization model and presenting the optimal set of product configurations and for presenting costs, revenue, and parts needed for the optimal set of product configurations (column/line 6/56-7/2, 7/13-30).

It would have been obvious to one of ordinary skill in the art to include the business system of Brunner with the ability to cost and revenue optimization as taught by Kapadia since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Brunner in view of Kapadia does not explicitly teach incorporating demand for the valid product configurations. However, Schierholt teaches:

m.   a demand simulator for receiving historical demand associated with all possible product configurations and calculating relative demand for each of the valid product configurations (paragraph 0008, 0010, 0013);

It would have been obvious to one with ordinary skill in the art to combine the method disclosed in Brunner and Kapadia with the methods in Schierholt to improve the optimization process to increase profit.

29.   As to claim 25, Brunner further teaches wherein the generated optimum subset of valid product configurations comprises the product configurations that a manufacturer should manufacture to meet the desired objective (column/line 14/65 - 15/10).

30.   Regarding claim 26, Brunner further teaches wherein the generated optimum subset of valid product configurations comprises the product configurations that a retailer should offer for sale to customers to meet the desired objective (column/line 14/65 - 15/10).

Conclusion

31.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action.   Accordingly, **THIS ACTION IS MADE FINAL**.   See MPEP § 706.07(a).   Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

32.   A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action.   In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action.   In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

33.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRANDI P. PARKER whose telephone number is (571) 272-9796. The examiner can normally be reached on Mon-Thurs. 8-5pm.

34.   If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bradley B. Bayat can be reached on (571) 272-6704.   The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

35.   Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.   Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/BRANDI P PARKER/
Examiner, Art Unit 3624

/Bradley B Bayat/
Supervisory Patent Examiner, Art Unit 3624